

## REMARKS

Applicant notes with appreciation the Examiner's determination that claims 20-25 and 29 are allowable. These claims were objected to as depending on rejected claims.

The remaining claims were rejected as unpatentable over the Ramesh et al. patent, by itself or in combination with other cited references. The Ramesh patent, however, does not disclose or suggest

### Rejection Under 103(a) over Ramesh et al.

Claims 1, 2, and 5-8 have been rejected as unpatentable over the Ramesh patent, U.S. Patent 6,274,228. Applicant respectfully traverses the rejection.

The Ramesh patent discloses a method for making a heat-shrinkable film. Col. 3, lines 43-44. A coextruded film having an EVOH layer and an adjacent second layer of polyester, polyamide, or polyurethane is oriented to form a preliminary heat shrinkable film. *Id.* at lines 45-52. A film is "oriented" by rapid stretching at a temperature above the glass transition temperature and, for a semi-crystalline material, below the melting point, followed by rapid quenching to preserve the molecular order obtained through the stretching. *Encyclopedia of Polymer Science and Engineering*, Vol. 7, p.96. When the film is heated to a high enough temperature, molecular movement again becomes possible; the molecules relax, and the film shrinks. The Ramesh patent's preliminary heat shrinkable film has a problem of shrinking along its width when stored at temperatures of 40-50°C. Col. 2, lines 13-18. Annealing a web of film at temperatures slightly higher than expected temperatures to

which the film will be exposed overcomes the problem of width shrinkage, but reduces interlayer bond strength compared to non-annealed films. Column 2, lines 62-67.

The Ramesh patent teaches that the width shrinkage/reduction in interlayer bond strength problem can be overcome with a heat shrinkable film having a first layer of EVOH and a second layer of polyester, polyamide, or polyurethane. Column 3, lines 27-30. The film is made by coextruding the film, cooling, orienting the film at a temperature between 60 and 140°C, cooling, and heating the oriented film to 35 to 100°C. *Id.* at lines 43-59. An annealing step is carried out to provide stability in film width. Col. 3, lines 53-59.

It is important to understand that heating the oriented film again to its orientation temperature causes the film to shrink "almost to its original unstretched, i.e., pre-oriented dimensions." Col. 6, lines 18-20. At the orientation temperatures, the molecules are again mobile and relax to their random, less energetic orientations. The heat-shrinkable film returns to its initial state. Thus, the Ramesh annealing step is carried out at a temperature sufficient to prevent width shrinkage, but not high enough to undo the orientation needed for heat shrinking the film during food processing. See column 27, lines 50-62 (describing necessary free shrink to work effectively in cook-in applications).

The Ramesh patent annealing step is carried out at a temperature of at least 35°C, but not more than 100°C. Column 3, lines 55-56; see also column 12, lines 31-61. Note that, as pointed out in column 12 at lines 53-55, the desired result is that the film is shrink-free in the traverse direction at 50°C, but still has some free shrink at the

slightly higher temperature of 57°C so that the film will conform to the shape of the food product during the cook-in process. To heat the film to the temperature of at least 35°C but no more than 100°C, the oriented film is exposed "to an environment with a temperature of greater than 35°C. . . . ." Col. 14, lines 23-27 (emphasis added). The time of exposure depends on the heat transfer process and temperature of the environment. *Id.* at line 29 et. seq. The temperature of a gaseous environment may be high, but the exposure time will then be very short. The film is not heated up to the temperature of the environment, but to a much lower temperature. Column 15, lines 10-27 ("the temperature of the film reaches at least 34°C. . ."). Thus, read in context, the disclosure in column 14 does not suggest heating the Ramesh oriented film to 200°C for up to several hours, as asserted in the Office Action. Rather, the exposure will be limited so that shrinkage in the transverse direction is preserved at temperatures above 50°C.

Consequently, the film does not reach temperatures at least 50°C above a thermal transition temperature of a polymeric component, either.

The Office Action also states that the Ramesh patent teaches "a method for improving adhesion between two adjacent layers of a laminate membrane," implying that the Ramesh annealing increases interlayer adhesion of its film. Applicant strongly disagrees. What Ramesh teaches is that its described annealing *decreases* interlayer adhesion in its oriented film. Column 2, lines 62-67; column 28, lines 12-21. The particular laminate film of this patent, however, is resistant to the delamination. Col. 23, lines 22-30; column 28, lines 12-21.

The rejection rests on an illusory support of statements taken out of context, their meaning distorted by pure hindsight analysis.

For these reasons, Applicant submits that the Ramesh patent does not teach, disclose, or suggest the present invention. Applicant respectfully requests withdrawal of the rejection and reconsideration and allowance of the claims.

Rejection Under 103(a) Over Ramesh et al. in View of Wang et al.

Claim 3 has been rejected as unpatentable over the Ramesh patent, U.S. Patent 6,274,228, in view of the Wang patent, U.S. Patent No. 6,124,007. Applicant respectfully traverses the rejection.

Applicant reiterates the above comments on the Ramesh patent. The Wang patent does not provide the teachings absent in the Ramesh patent. The Wang angioplasty balloon has two layers of separately-oriented thermoplastic materials. One tube is stretched, inserted into the other, then the other tube is stretched. A post-blowing annealing shrinks the balloon so that it has a "stepped compliance curve" as in Figure 7. Like in the Ramesh method, the oriented material is partially relaxed. See column 6, line 50 to column 7, line 3.

There is, moreover, no motivation to turn to the Wang reference, save in hindsight of Applicant's invention. The Ramesh patent does not appear to require improved flexibility or burst strength. It is fanciful to suggest that the shrink-wrapped meat products Ramesh prepares have a problem with containing their internal pressures.

Thus, the claims are patentable over the cited Ramesh and Wang patents. Accordingly, Applicant respectfully requests reconsideration and allowance of claim 3.

Rejection Under 103(a) Over Ramesh et al. in View of Bonk et al.

Claims 4, 16-19, and 26-28 have been rejected as unpatentable over the Ramesh patent, U.S. Patent No. 6,274,228, in view of the Bonk patent, U.S. Patent No. 6,082,025. Applicant respectfully traverses the rejection and requests reconsideration of the claims in light of the following discussion.

With regard to the teachings of the Ramesh patent, Applicant reiterates the comments made above.

The Bonk reference does not remedy the shortcomings of the Ramesh patent. The Bonk patent does not describe any post-forming heating of its laminate membranes. Further, there is no motivation to turn to the Bonk patent materials to modify the Ramesh patent cook-in laminates. The mere fact that other materials exist or are used in laminates in other applications does not satisfy the legal standard of obviousness. For instance, with regard to claim 26, the Examiner has not explained how glass transition temperature has any bearing on interlayer adhesion or supported his inference that it does.

Accordingly, Applicant submits that the claims are patentable over the combination of the Ramesh and Bonk patents. Reconsideration of the claims is respectfully requested.

Rejection Under 103(a) Over Ramesh et al. in View of Bonk et al. and Wang et al.

Claims 10-15 have been rejected as unpatentable over the Ramesh patent, U.S. Patent No. 6,274,228, in view of the Bonk patent, U.S. Patent No. 6,082,025, and the Wang patent, U.S. Patent No. 6,124,007. Applicant respectfully traverses the rejection and requests reconsideration of the claims in light of the following discussion.

Because, as discussed already in the previous sections, the cited references do not describe or suggest the underlying claims on which these claims depend, the cited references also do not suggest the subject matter of these claims.

Accordingly, Applicant submits that the claims are patentable over the cited combination of patents. Reconsideration of the claims is respectfully requested.

Rejection Under 103(a) Over Ramesh et al. in Concise Encyclopedia of Polymer Science and Engineering

Claim 9 has been rejected as unpatentable over the Ramesh patent, U.S. Patent No. 6,274,228, in view of page 1234 of the *Concise Encyclopedia of Polymer Science and Engineering* ["the Encyclopedia"]. Applicant respectfully traverses the rejection and requests reconsideration of the claim for the following reasons.

Applicant reiterates the comments made above regarding the Ramesh patent.

The excerpt from the Encyclopedia concerns the physical properties of poly(vinyl alcohol), not poly(ethylene-co-vinyl alcohol). Hence, it is irrelevant and does not support the contention the Office Action suggests. Further, as pointed out, the Ramesh film is not brought to 200°C, only (at the extreme) the environment in which it

is heated. Moreover, while Applicant teaches that Applicant's method increases interlayer adhesion, the Ramesh method apparently does not. Thus, the motivation offered by the Office Action fails to find a basis in the cited art.

Accordingly, Applicant submits that the claim is patentable over the Ramesh patent and the Encyclopedia entry cited. Reconsideration of the claim is respectfully requested.

#### Conclusion

It is believed that all of the stated grounds of rejection have been properly traversed, accommodated, or rendered moot. Applicant therefore respectfully requests that the Examiner reconsider and withdraw all presently outstanding rejections. It is believed that a full and complete response has been made to the rejections of the final Office Action, and as such, the present application is in condition for allowance. Thus, prompt and favorable consideration of this amendment is respectfully requested. The Examiner is invited to telephone the undersigned if it would be helpful for resolving any issue or would expedite prosecution.

Respectfully submitted,



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